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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,013	11/13/2001	Yuichi Yamaguchi	A316-1	6374
466	7590	05/21/2004	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			SEFER, AHMED N	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,013

Applicant(s)

YAMAGUCHI ET AL.

Examiner

A. Sefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-12, 20 and 21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6, 8-12, 20 and 21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Response to Amendment

1. The amendment filed on March 4 has been entered. Claim 7 has been cancelled and new claims 20 and 21 have been added.

Allowable Subject Matter

2. The indicated allowability of claim 11 is withdrawn in view of the newly discovered reference(s) to Kanou et al. ("Kanou") US PG-Pub 2001/0010571. Rejections based on the newly cited reference(s) follow.

Claim Objections

3. Claim 3, 11 and 21 are objected to because of the following informalities: In claim 3, line 3, "said substrate" should read "said first substrate" and line 6, "plural projections" should read "plurality of projections"; the limitation "wherein said first projection is formed on said wiring layer" recited in claim 11 appears to be redundant; and in claim 21, "said compensating layer" should read "said compensation layer" and "said plural projections" should read "said plurality of projections". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11 and 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 11 recites the limitation "said first projection". There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "said linear projections". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 1-6 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanou.

Kanou discloses in figs. 1 and 4-6 a liquid crystal display device comprising: (a) a first substrate 582; (b) a second substrate 581 spaced away from and facing said first substrate; (c) a liquid crystal layer 61 sandwiched between said first and second substrates; (d) a transistor 40 formed on said first substrate; (e) a wiring layer 67 formed on said first substrate and electrically connected to said transistor; (f) a reflection electrode 51 formed on said first substrate, an external incident light being reflected at said reflection electrode towards a viewer; and (g) a compensation layer (49, 66) formed directly on said wiring layer or a compensation layer

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comprising a projection formed on said wiring layer (as in claim 6), said reflection electrode not overlapping either said wiring layer or said compensation layer.

As for claim 2, Kanou discloses an electrically insulating film 44 having a wavy surface 50, and wherein said reflection electrode is formed on said electrically insulating film and has a surface reflecting said wavy surface of said electrically insulating film.

As for claim 3, Kanou further discloses a plurality of projections 66 formed on said substrate, said electrically insulating film covering said plural projections.

As for claims 4 and 5, Kanou further discloses said electrically insulating film having substantially the same height as a height of said reflection electrode, said height being measured from a surface of said first substrate (as in claim 5) and being formed on said compensation layer.

As for claim 8, Kanou discloses a reflection electrode having ends located above and in alignment with opposite ends of said wiring layer.

As for claim 9, Kanou discloses thin film transistors 40 on said first substrate each acting as a switching device and each applied to each of pixels.

As for claim 10, Kanou discloses a projection defining a rectangular frame, and said plural projections defining a plurality of linear projections each extending in different directions from one another within said rectangular frame.

8. Claims 11 and 12, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Kanou.

Kanou discloses in figs. 1 and 4-6 a liquid crystal display device comprising: (a) a first substrate 582; (b) a second substrate 581 spaced away from and facing said first substrate; (c) a

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liquid crystal layer 61 sandwiched between said first and second substrates; (d) a transistor 40 formed on said first substrate; (e) a wiring layer 67 formed on said first substrate and electrically connected to said transistor; (f) a reflection electrode 51 formed on said first substrate, an external incident light being reflected at said reflection electrode towards a viewer; and (g) a compensation layer (49, 66) formed directly on said wiring layer, said reflection electrode not overlapping said wiring layer, said compensation layer having almost the same height as a height of said reflection electrode, said height being measured from a surface of said first substrate, further comprising an electrically insulating film 44 having a wavy surface 50, and wherein said reflection electrode is formed on said electrically insulating film and has a surface reflecting said wavy surface of said electrically insulating film, wherein said electrically insulating film being comprised of a projection formed on said first substrate, and an insulating layer covering said projection therewith, wherein said projection defines a rectangular frame formed on said wiring layer, and wherein said first projection being formed on said wiring layer; wherein said first projection has a greater width than a width of said linear projection (as in claim 12).

9. Claims 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanou.

Kanou discloses in figs. 1 and 4-6 a liquid crystal display device comprising a first substrate 582; a second substrate 581 spaced away from and facing said first substrate; a liquid crystal layer 61 sandwiched between said first and second substrates; a transistor 40 formed on said first substrate; a wiring layer 67 formed on said first substrate and electrically connected to said transistor; a reflection electrode 51 formed on said first substrate, an external incident light being reflected at said reflection electrode towards a viewer; and a compensation layer (49,

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66) formed directly on said wiring layer, said reflection electrode not overlapping said wiring layer, wherein a highest point of said compensation layer and a highest point of said reflection electrode have substantially the same height, said height being measured from a surface of said first substrate.

As for claim 21, Kanou discloses said compensating layer comprising a plurality of projections on said first substrate and an insulating layer covering said projections therewith, wherein one of said plural projections is on said wiring layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

ANS
May 12, 2004